

NASA TECH BRIEF



NASA Tech Briefs are issued to summarize specific innovations derived from the U.S. space program, to encourage their commercial application. Copies are available to the public at 15 cents each from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia 22151.

Manual of Industrial Diamonds Plus Dressing and Grinding Criteria for Machining Superalloys

The problem:

The wheels on grinding machines used for cylindrical (outer and inner) surface, centerless, and tool and cutter grinding must be dressed repeatedly to provide optimum performance. There is no single source of information available to an industrial shop that provides guidelines as to the proper selection and use of available diamond wheels.

The solution:

A manual that will combine, in the form of an acceptance standard, the important and controlling factors for the proper selection and use of stones for cutting and dressing grinding wheels.

This manual is a compilation of empirical data that has been assembled from the various trade journals, publications, and technical reports, providing available machining criteria for the specific types of grinding on superalloys.

In addition, this manual incorporates an original companion treatise on the physical descriptions of the diamond stones, their grading, and their application for dressing, suggested nib-to-wheel attitudes, and grinding wheel, stone, and stone-mount recommendations on 14 selected standard diamond wheel dressing mounts.

Notes:

1. This manual provides extensive knowledge and should be useful to thousands of machine shops throughout this country. As evidence of the significance of the information provided in this manual, one industrial diamond company executive, a member of the Importers and Dealers Committee of the Industrial Diamond Association of America, has requested copies from the publisher.
2. Inquiries concerning this innovation may be directed to:

Technology Utilization Officer
Marshall Space Flight Center
Huntsville, Alabama 35812
Reference: B68-10239

Patent status:

No patent action is contemplated by NASA.

Source: Willis L. Carr
of North American Rockwell Corporation
under contract to
Marshall Space Flight Center
(MFS-14582)

Category 05

IS-CAS-42D

RM. 1313

KSC HQS.